

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

[Docket No.: 011204291-1291-01]

RIN 0693-ZA47

Small Grants Programs; Availability of Funds

AGENCY: National Institute of Standards and Technology, Commerce.

ACTION: Notice.

SUMMARY: The National Institute of Standards and Technology (NIST) announces that the following programs are soliciting applications for financial assistance for FY 2002: (1) the Precision Measurement Grants Program; (2) the 2002 Summer Undergraduate Research Fellowships (SURF) in the areas of Electronics and Electrical Engineering, Manufacturing Engineering, Chemical Science and Technology, Physics, Materials Science and Engineering, Building and Fire Research, and Information Technology; (3) the Electronics and Electrical Engineering (EEEL) Grants Program; (4) the Manufacturing Engineering Laboratory (MEL) Grants Program; (5) the Chemical Science and Technology Laboratory Grants Program; (6) the Physics Laboratory Grants Program; (7) the Materials Science and Engineering Grants Program; and (8) the Fire Research Grants Program.

The *Precision Measurement Grants Program* is seeking proposals for significant, primarily experimental, research in the field of fundamental measurement or the determination of fundamental constants.

The programs “*SURFing the Electronics and Electrical Engineering Laboratory*,” “*SURFing the Manufacturing Engineering Laboratory*,” “*SURFing the Chemical Science and Technology Laboratory*,” “*SURFing the Physics Laboratory*,” “*SURFing the Materials Science and Engineering Laboratory*,” “*SURFing the Building and Fire Research Laboratory*,” and “*SURFing the Information Technology Laboratory*,” will provide an opportunity for the NIST Electronics and Electrical Engineering Laboratory (EEEL), Manufacturing Engineering Laboratory (MEL), Chemical Science and Technology Laboratory (CSTL) Physics Laboratory (PL), Materials Science and Engineering Laboratory (MSEL), Building and Fire Research Laboratory (BFRL), and Information Technology Laboratory (ITL), and the National Science Foundation (NSF) to join in a partnership to encourage outstanding undergraduate students to pursue careers in science and engineering.

The EEEL program will provide research opportunities with internationally known NIST scientists in the fields of semiconductors (including mainstream silicon, power devices, and compound semiconductors), fundamental electrical measurements, electronic instrumentation, electrical systems, and electronic information. The MEL program will provide research opportunities with internationally known NIST scientists in the fields of intelligent systems, manufacturing metrology, precision engineering, and manufacturing systems integration. The

CSTL program will provide research opportunities with internationally known NIST scientists in the fields of chemical characterization of materials, process metrology, chemical and biochemical sensing, nanotechnology, healthcare measurements, environmental measurements, microelectronics, physical property data, chemical and biochemical data, bio-molecules and materials, DNA technologies, and international measurement standards. The PL program will involve students in world-class atomic, molecular, optical (AMO) and radiation physics research with internationally known physicists in the NIST Physics Laboratory. The MSEL program will provide research opportunities with internationally known NIST scientists in the fields of ceramics, solid state chemistry, metallurgy, polymers, neutron condensed matter science, and materials reliability. The BFRL program will provide research opportunities with internationally known NIST scientists in the fields of building materials (concrete, coating), structure (earthquake), building environment (indoor air quality, thermal machinery), and fire science and engineering. The ITL program will provide research opportunities with internationally known NIST scientists in the fields of networking, software quality, security, information access, convergent systems, mathematical science, and statistics. The NIST Program Directors will work with physics, chemistry, materials science, manufacturing engineering, intelligent systems, automated production, precision engineering, information technology, building materials, constructed structures, and other science-related department chairs and directors of multi-disciplinary academic organizations to identify outstanding undergraduates (including graduating seniors) who would benefit from off-campus summer research in an honors academy environment.

The *Electronics and Electrical Engineering (EEEL) Grants Program* provides grants and cooperative agreements for the development of fundamental electrical metrology and of metrology supporting industry and government agencies in the broad areas of semiconductors, electronic instrumentation, radio-frequency technology, optoelectronics, magnetics, video, electronic commerce as applied to electronic products and devices, the transmission and distribution of electrical power, national electrical standards (fundamental, generally quantum-based physical standards), and law enforcement standards.

The *Manufacturing Engineering Laboratory (MEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Dimensional Metrology for Manufacturing, Mechanical Metrology for Manufacturing, Intelligent Systems, and Information Systems Integration for Applications in Manufacturing.

The *Chemical Science and Technology Laboratory (CSTL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Biotechnology, Process Measurements, Surface and Microanalysis Science, Physical and Chemical Properties, and Analytical Chemistry.

The *Physics Laboratory (PL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Electron and Optical Physics, Atomic Physics, Optical Technology, Ionizing Radiation, and Time and Frequency.

The Materials Science and Engineering Laboratory (MSEL) Grants Program will provide grants and cooperative agreements in the following fields of research: Ceramics, Metallurgy, Polymer Sciences, Neutron Scattering Research and Spectroscopy.

The Fire Research Grants Program will provide funding for innovative ideas in the fire research area generated by the proposal writer, who chooses the topic and approach, consistent with the program description and objectives of this notice.

SUPPLEMENTARY INFORMATION

Precision Measurement Grants Program:

DATES: Applicants for the *Precision Measurement Grants Program* must submit an abbreviated proposal for preliminary screening. Based on the merit of the abbreviated proposal, applicants will be advised whether a full proposal should be submitted. The abbreviated proposals must be received at the address listed below no later than the close of business February 1, 2002. Proposals received after this deadline will be returned with no further consideration. The finalists will be notified of their status by March 22, 2002, and will be requested to submit full proposals to NIST by close of business on May 10, 2002. NIST expects to issue awards on or before September 30, 2002.

ADDRESSES: *For the Precision Measurement Grants Program*, applicants are requested to

direct technical questions and submit an abbreviated proposal (original and two (2) signed copies), with a description of their proposed work of no more than five (5) double spaced pages to:

Dr. Peter J. Mohr

Manager, NIST Precision Measurement Grants Program

National Institute of Standards and Technology

Bldg. 225, Rm. B161

100 Bureau Drive, Stop 8401

Gaithersburg, MD 20899-8401

Tel: (301) 975-3217

E-mail: mohr@nist.gov

Website: <http://physics.nist.gov/pmg>

Although applicants are not required to submit more than three copies of the proposal, the normal review process for the Precision Measurement Grants Program utilizes ten (10) copies. Applicants are encouraged to submit sufficient proposal copies for the full review process if they wish all reviewers to receive color, unusually sized (not 8.5" x 11"), or otherwise unusual materials submitted as part of the proposal. Only three copies of the Federally required forms are needed.

AUTHORITY: The authority for the *Precision Measurement Grants Program* is as follows:

As authorized by 15 U.S.C. 272 (b) and (c), NIST conducts directly, and supports through grants and cooperative agreements, a basic and applied research program in the general area of fundamental measurement and the determination of fundamental constants of nature.

PROGRAM DESCRIPTION AND OBJECTIVES: The program description and objectives for the *Precision Measurement Grants Program* are as follows: As part of its research program, since 1970 NIST has awarded Precision Measurement Grants to U.S. universities and colleges so that faculty may conduct significant, primarily experimental research in the field of fundamental measurement or the determination of fundamental constants. NIST sponsors these grants and cooperative agreements primarily to encourage basic, measurement-related research in U.S. universities and colleges and to foster contacts between NIST scientists and those faculty members of U.S. academic institutions who are actively engaged in such work. The Precision Measurement Grants are also intended to make it possible for researchers to pursue new, fundamental measurement ideas for which other sources of support may be difficult to find. There is some latitude in research topics that will be considered under the *Precision Measurement Grants Program*. The key requirement is that the proposed project support NIST's ongoing work in the field of basic measurement science, which includes:

1. Experimental and theoretical studies of fundamental physical phenomena which test the basic laws of physics or which may lead to new or improved fundamental measurement methods and standards.

2. The determination of important fundamental physical constants.

Although proposals for either experimental or theoretical research will be considered, the former will be given preference because of the more immediate applicability of experimental work to metrology. Proposals from workers at the assistant and associate professor level who have some record of accomplishment are especially encouraged in view of the comparative difficulty researchers have in obtaining funds at the early stages of their careers.

Typical projects which have been funded through the *NIST Precision Measurement Grants Program* include:

- (1) Development of an atom interferometer gyroscope for tests of general relativity, M. Kasevich, Stanford University.
- (2) Spectroscopy of francium: towards a precise parity nonconservation measurement in a laser trap, Luis A. Orozco, State University of New York at Stony Brook.
- (3) Measurement of Newton's constant G using a new method, J.H. Gundlach, University of Washington.
- (4) Measurement of the polarization of the cosmic microwave background, S.T. Staggs, Princeton University.
- (5) Combining the quantum Hall and AC Josephson effects for electric current metrology, E.A. Gwinn, University of California, Santa Barbara.
- (6) A test of CPT symmetry using a new $K\text{-}^3\text{He}$ self-compensating magnetometer,

M.V. Romalis, University of Washington.

ELIGIBILITY: Eligible applicants are institutions of higher education, other non-profits, commercial organizations, international organizations, state, local and Indian tribal governments and Federal agencies with appropriate legal authority. Applications from non-Federal and Federal applicants will be competed against each other. Proposals selected for funding from non-Federal applicants will be funded through a project grant or cooperative agreement under the terms of this notice. Proposals selected for funding from non-NIST Federal agencies will be funded through an interagency transfer. Please Note: Before non-NIST Federal applicants may be funded, they must demonstrate that they have legal authority to receive funds from another federal agency in excess of their appropriation. As this announcement is not proposing to procure goods or services from applicants, the Economy Act (31 U.S.C. 1535) is not an appropriate legal basis.

FUNDING AVAILABILITY: For the *Precision Measurement Grants Program*, the annual budget is approximately \$300,000. Two new grants in the amount of \$50,000 per year will be awarded; the remaining \$200,000 will fund continuing grants. Applicants must propose multi-year projects, not to exceed three (3) years. The scope of work must be clearly severable into annual increments of meaningful work that represent solid accomplishments in case continued funding is not made available to the applicant.

PROPOSAL REVIEW PROCESS: For the *Precision Measurement Grants Program*, to

simplify the proposal writing and evaluation process, the following selection procedure will be used:

Applicants will initially submit abbreviated proposals, containing a description of the proposed project, including sufficient information to address the evaluation criteria, with a total length of no more than five (5) double spaced pages, to the mailing address given above in the “Addresses” section. These proposals will be screened to determine whether they address the requirements outlined in this notice. Proposals that do not meet those requirements will not be considered further. Eight independent, objective individuals, at least half of whom are NIST employees, and who are knowledgeable about the scientific areas that the program addresses will conduct a technical review of each proposal, based on the evaluation criteria described in the Evaluation Criteria section for this program. The proposals will then be ranked based on the average of the reviewers’ rankings. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but ranks will be determined on an individual basis, not as a consensus.

The program’s selecting official will then select approximately four to eight finalists. In selecting finalists, the program’s selecting official will take into consideration the results of the reviewers’ evaluations, including rank, and relevance to the program objectives described above.

Finalists will then be asked to submit full proposals containing a description of the proposed

project, including sufficient information to address the evaluation criteria, with a total length of no more than ten (10) double spaced pages in addition to the federally mandated forms and certifications, to the mailing address given above in the “Addresses” section. The same independent reviewers will then evaluate the detailed proposals based on the same evaluation criteria, and the proposals will be ranked as previously described. In selecting proposals that will be recommended for funding, the program’s selecting official will take into consideration the results of the reviewers’ evaluations, including rank, and relevance to the program objectives described in the Program Description and Objectives section for this program.

Two proposals will be selected for funding by the end of fiscal year 2002. The final approval of selected applications and award of grants or cooperative agreements will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible.

Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award.

The decision of the Grants Officer is final.

EVALUATION CRITERIA:

The evaluation criteria to be used in evaluating the abbreviated application proposals and full proposals are:

1. The importance of the proposed research - Does it have the potential of answering some currently pressing question or of opening up a whole new area of activity?
2. The relationship of the proposed research to NIST's ongoing work - Will it support one of NIST's current efforts to develop a new or improved fundamental measurement method or physical standard, test the basic laws of physics, or provide an improved value for a fundamental constant?
3. The feasibility of the research and the potential impact of the grant - Is it likely that significant progress can be made in a three year time period with the funds and personnel available and that the funding will enable work that would otherwise not be done with existing or potential funding?
4. The qualifications of the applicant - Does the educational and employment background and the quality of the research, based on recent publications, of the applicant indicate that there is a high probability that the proposed research will be carried out successfully?

Each of these factors is given equal weight in the evaluation process.

AWARD PERIOD: For the *Precision Measurement Grants Program*, NIST is now accepting applications for two new grants in the amount of \$50,000 per year to be awarded for the initial period of September 30, 2002 through September 29, 2003 . Each award may be continued for up to two additional years; however, future or continued funding will be at the discretion of NIST based on satisfactory performance, continuing relevance to program objectives, and the availability of funds.

MATCHING REQUIREMENTS: The Precision Measurement Grants Program does not require any matching funds.

APPLICATION KIT: For the *Precision Measurement Grants Program*, an application kit, containing all required application forms and certifications will be provided to the finalists by Ms. Bonnie Whipp, (301) 975-4750.

EEEL, MEL, CSTL, PL, MSEL, BFRL, and ITL SURF Programs:

DATES: The *EEEL, MEL, CSTL, PL, MSEL, BFRL, and ITL SURF Programs* proposals must be received no later than the close of business February 15, 2002.

ADDRESSES: For the *PL, MSEL, MEL, ITL, BFRL, EEEL, and CSTL SURF Programs*, applicant institutions must submit one signed original and two (2) copies of the proposal to:

Attn.: Ms. Anita Sweigert

National Institute of Standards and Technology

100 Bureau Drive, Stop 8400

Gaithersburg, MD 20899-8400

Tel: (301) 975-4200

E-mail: anita.sweigert@nist.gov

Website: <http://www.surf.nist.gov>

Technical questions for the EEEL, MEL, CSTL, PL, MSEL, BFRL, and ITL SURF Programs should be directed to the following contact persons: for the EEEL SURF Program, Dr. David Newell, Tel: (301) 975-4228, E-mail: david.newell@nist.gov; for the MEL SURF Program, Ms. Lisa Jean Fronczek, Tel: (301) 975-6633, E-mail: lfronczek@nist.gov; for the CSTL SURF Program, Michael S. Epstein, Tel: (301) 975-8306, E-mail: michael.epstein@nist.gov; for the PL SURF Program, Dr. Marc Desrosiers, Tel: (301) 975-5639, E-mail: marc.desrosiers@nist.gov; for the MSEL SURF Program, Dr. Terrell A. Vanderah, Tel: (301) 975-5785, E-mail: terrell.vanderah@nist.gov; for the BFRL SURF Program, Dr. Chris White, Tel: (301) 975-6016, E-mail: cwhite@nist.gov, or Dr. Clarissa Ferraris, Tel: (301) 975-6711, E-mail: clarissa@nist.gov; and for the ITL SURF Program, Dr. Larry Reeker, Tel: (301) 975-5147, E-mail: larry.reeker@nist.gov.

AUTHORITY: The authority for the *EEEL, MEL, CSTL, PL, MSEL, BFRL* and *ITL SURF*

Programs is as follows: 15 U.S.C. 278g-1 authorizes NIST to fund financial assistance awards to students at institutions of higher learning within the United States. These students must show promise as present or future contributors to the missions of NIST. Cooperative agreements are awarded to assure continued growth and progress of science and engineering in the United States, including the encouragement of women and minority students to continue their professional development.

PROGRAM DESCRIPTION AND OBJECTIVES: The program description and objectives for the *EEEL*, *MEL*, *CSTL*, *PL*, *MSEL*, *BFRL*, and *ITL SURF Programs* are as follows: To build a mutually beneficial relationship between the student, the institution of higher learning, and NIST. This is the tenth year of the *PL SURF Program*, partially funded by the NSF Physics Division as a Research Experience for Undergraduates (REU) site. This is the fifth year of the *MSEL SURF Program* funded by the NSF Division of Materials Research (DMR) as a REU site. This is the fourth year of the *MEL SURF Program* and the second year of the *BFRL SURF Program*, both funded by the NSF Division of Engineering Education and Centers (EEC) as REU sites. This is the second year of the *ITL SURF Program* funded by the NSF Division of Experimental and Integrative Activities in the Directorate for Computer and Information Science and Engineering (CISE) as a REU site.

NIST is one of the nation's premiere research institutions for the physical and engineering sciences and, as the lead Federal agency for technology transfer, it provides a strong interface between government, industry and academia. NIST embodies a special science culture,

developed from a large and well-equipped research staff that enthusiastically blends programs that address the immediate needs of industry with longer-term research that anticipates future needs. This occurs in few other places and enables the Electronics and Electrical Engineering Laboratory, Manufacturing Engineering Laboratory, Chemical Science and Technology Laboratory, Physics Laboratory, Materials Science and Engineering Laboratory, Building and Fire Laboratory, and Information Technology Laboratory to offer unique research and training opportunities for undergraduates, providing them a research-rich environment and exposure to state of the art equipment.

NIST's EEEL strives to be the world's best source of fundamental and industrial-reference measurement methods and physical standards for electrotechnology. To be a world-class resource for semiconductor measurements, data, models, and standards focused on enhancing U.S. technological competitiveness in the world market, research is conducted in semiconductor materials, processing, devices, and integrated circuits to provide, through both experimental and theoretical work, the necessary basis for understanding measurement-related requirements in semiconductor technology. To provide the world's most technically advanced and fundamentally sound basis for all electrical measurements in the United States, the EEEL's research projects include maintaining and disseminating the national electrical standards, developing the measurement methods and services needed to support electrical materials, components, instruments, and systems used for the generation, transmission, and application of conducted electrical power, and related activities in support of the electronics industry including research on video technology and electronic product data exchange.

NIST's MEL conducts theoretical and experimental research in length, mass, force, vibration, acoustics, and ultrasonics, as well as intelligent machines, precision control of machine tools, information technology for the integration of all elements of a product's life cycle. Much of this applied research is devoted to overcoming barriers to the next technological revolution, in which manufacturing facilities are spread across the globe. MEL's research and development leads to standards, test methods and data that are crucial to industry's success in exploiting advanced manufacturing technology. Critical components of manufacturing at any level are measurement and measurement-related standards, not just of products, but increasingly of information about products and processes. Thus, MEL programs enhance both physical and information-based measurements and standards. Research projects can be theoretical or experimental, and will range in focus from intelligent machine control, characterizing a manufacturing process or improving product data exchange, to the accurate measurement of an artifact's dimensions.

NIST's CSTL strives to be a world-class research laboratory that is recognized by the Nation as the primary source for the chemical, biochemical, and chemical engineering measurements, data, models, and reference standards that are required to enhance U.S. industrial competitiveness in the world market. CSTL is the primary reference laboratory for chemical measurements, entrusted with developing, maintaining, advancing, and enabling the chemical measurement system for the United States of America, thereby enhancing industry's productivity and competitiveness, establishing comparability of measurements to facilitate equity of global trade, and improving public health, safety, and environmental quality.

CSTL's activities include: Chemical Characterization of Materials, Process Metrology, Chemical and Biochemical Sensing, Nanotechnology, Healthcare Measurements, Environmental Measurements, Microelectronics, Physical Property Data, Chemical and Biochemical Data, Bio-Molecules and Materials, DNA Technologies, and International Measurement Standards.

Attending to the long-term needs of many U.S. high-technology industries, NIST's Physics Laboratory conducts basic research in the areas of quantum, electron, optical, atomic, molecular, and radiation physics. To achieve these goals, PL staff develop and utilize highly specialized equipment, such as polarized electron microscopes, scanning tunneling microscopes, lasers, and x-ray and synchrotron radiation sources. Research projects can be theoretical or experimental and will range in focus from computer modeling of fundamental processes through trapping atoms and choreographing molecular collisions, to standards for radiation therapy.

NIST's MSEL conducts basic research in the electronic, magnetic, optical, superconducting, mechanical, thermal, chemical, and structural properties of metals, ceramics, polymers, and composites. Much of this applied research is devoted to overcoming barriers to the next technological revolution, in which individual atoms and molecules will serve as the fundamental building blocks of devices. Preparation of unique materials by atomic level tailoring of multi-layers, perfect single crystals, and nanocomposites are just some of the future technologies being developed and explored in NIST's MSEL. To achieve these goals,

staff develop and utilize highly specialized equipment, such as high resolution electron microscopes, atomic force microscopes, neutron scattering instruments, x-ray diffraction sources, lasers, magnetometers, plasma furnaces, melt spinners, molecular beam epitaxy systems, and thermal spray systems. Research projects can be theoretical or experimental and will range in focus from the structural, chemical, and morphological characterization of advanced materials made in the NIST laboratories to the accurate measurement of the unique properties possessed by these special materials.

NIST's BFRL provides technical leadership and participates in developing the measurement and standards infrastructure related to materials critical to U.S. industry, academia, government, and the public. Building and Fire Research programs at NIST cover a full range of materials issues from design to processing to performance. Separate research initiatives address concrete, coating, earthquake resistance of structures, fire science and engineering, the theory and modeling of materials, and materials reliability. Through laboratory-organized consortia and one-on-one collaborations, BFRL's scientists and engineers work closely with industrial researchers, manufacturers of high-technology products, and the major users of advanced materials.

NIST's ITL responds to industry and user needs for objective, neutral tests for information technology. These are enabling tools that help companies produce the next generation of products and services, and that help industries and individuals use these complex products and services. ITL works with industry, research and government organizations to develop and

demonstrate tests, test methods, reference data, proof of concept implementations and other infrastructural technologies. Program activities include: high performance computing and communications systems; emerging network technologies; access to, exchange, and retrieval of complex information; computational and statistical methods; information security; and testing tools and methods to improve the quality of software.

SURF students will have the opportunity to work one-on-one with our nation's top scientists and engineers. It is anticipated that successful SURF students will move from a position of reliance on guidance from their research advisors to one of research independence during the twelve-week period. One goal of this partnership is to provide opportunities for our nation's next generation of scientists and engineers to engage in world-class scientific research at NIST, especially in ground-breaking areas of emerging technologies. This carries with it the hope of motivating individuals to pursue a Ph.D. in physics, chemistry, materials science, engineering, mathematics, or computer science, and to consider research careers. *SURFing the Electronics and Electrical Engineering Laboratory, SURFing the Manufacturing Engineering Laboratory, SURFing the Chemical Science and Technology Laboratory, SURFing the Physics Laboratory, SURFing the Materials Science and Engineering Laboratory, SURFing the Building and Fire Research Laboratory, and SURFing the Information Technology Laboratory* will help to forge partnerships with NSF and with post-secondary institutions that demonstrate strong, hands-on undergraduate science curricula, especially those with a demonstrated commitment to the education of women, minorities, and students with disabilities.

ELIGIBILITY: The *EEEL*, *MEL*, *CSTL*, *PL*, *MSEL*, *BFRL*, and *ITL*, *SURF Programs* are open to colleges and universities in the United States and its territories with degree granting programs in materials science, chemistry, engineering, computer science, mathematics, or physics. Participating students must be U.S. citizens or permanent U.S. residents.

FUNDING AVAILABILITY: For the *EEEL SURF Program*, the NIST EEEL anticipates receiving funding as a NSF REU Program at the level of \$50,000 per year. For the *MEL SURF Program*, the NIST MEL anticipates receiving funding as a NSF REU Program at the level of \$52,000 per year. For the *CSTL SURF Program*, the NIST CSTL will commit approximately \$50,000 to support these cooperative agreements and will pursue funding as a NSF REU Program at the level of \$50,000 per year.

For the *PL SURF Program*, the NIST PL will commit approximately \$50,000 to support these cooperative agreements. The NIST PL's REU Program is anticipating renewal of funding by the NSF at the level of \$85,000 per year. The anticipated direct costs for subsistence, travel, lodging, and conference attendance for twenty-two students is about \$135,000.

For the *MSEL SURF Program*, the NIST MSEL anticipates receiving funding as a NSF REU Program at the level of \$70,000 per year. It is anticipated that this funding will provide for the costs of subsistence, travel and lodging, and the conference attendance of ten students.

For the *BFRL SURF Program*, the NIST BFRL anticipates receiving funding as a NSF REU

Program at the level of \$50,000 per year. For the *ITL SURF Program*, the NIST ITL anticipates receiving second year funding as a NSF REU Program at the level of \$50,000 per year. It is anticipated that the funding for the *EEEL*, *MEL*, *CSTL*, *BFRL*, and *ITL SURF Programs* will provide for the costs of subsistence, travel and lodging, and the conference attendance of eight students for each program.

The actual number of awards made under this announcement will depend on the actual costs. For all *SURF Programs* described in this notice, it is expected that individual awards to institutions will range from approximately \$3,000 to \$70,000. NIST is negotiating with NSF to determine whether NIST may contract directly with apartment complexes for student housing, or whether funding for student housing will be included in cooperative agreements awarded as a result of this notice. Selected applicants will be informed prior to award whether housing will be provided via the cooperative agreement or provided separately by NIST.

PROPOSAL REVIEW PROCESS: The *EEEL*, *MEL*, *CSTL*, *PL*, *MSEL*, *BFRL*, and *ITL SURF Programs* conduct an initial screening of all proposals received by the deadline for substantially incomplete or non-responsive applications, which will not be considered for funding. All substantially complete proposals will be reviewed and ranked by a panel of three NIST scientists appointed by the Program Directors on the basis of the evaluation criteria. Proposals should include the following:

(A) Student Information:

- (1) student application information cover sheet;
- (2) official transcript for each student nominated for participation (students must have a recommended G.P.A. of 3.0 or better, out of a possible 4.0);
- (3) a personal statement from each student and statement of commitment to participate in the 2002 SURF program, including a description of the student's prioritized research interests;
- (4) a resume for each student; and
- (5) two letters of recommendation for each student.

(B) Information About the Applicant Institution:

- (1) description of the institution's education and research philosophy, faculty interests, on-campus research program(s) and opportunities, and overlapping research interests of NIST and the institution; and
- (2) a statement addressing issues of academic credit and cost sharing.

In recommending applications for funding, the program's selecting official will take into consideration the results of the panel's evaluations, including rank, the program objectives of the NIST laboratories as described above, and the relevance to the goals of the SURF Program. The final approval of selected applications and award of cooperative agreements will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to

modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

EVALUATION CRITERIA: For the *EEEL, MEL, CSTL, PL, MSEL, BFRL, and ITL SURF Programs*, the evaluation criteria are:

Evaluation of Student's Academic Ability and Commitment to Program Goals (70%):

Includes, but is not limited to, evaluation of the following: completed course work; expressed research interest; prior research experience; grade point average in courses relevant to program; career plans; honors and activities.

Evaluation of Applicant Institution's Commitment to Program Goals (30%): Includes, but is not limited to, evaluation of the following: institution's focus on AMO physics, chemistry, materials science, manufacturing research and all of its components, including but not limited to engineering, computer science, physics, electrical engineering, and mathematics; overlap between research interests of the institution and NIST; emphasis on undergraduate hands-on research; undergraduate participation in research conferences/programs; on-campus research facilities; past participation by students/institution in such programs; and commitment to educate women, minorities, and persons with disabilities.

AWARD PERIOD: For the *EEEL, MEL, CSTL, PL, MSEL, BFRL, and ITL SURF Programs*, these programs are anticipated to run between May 28 through August 16, 2002; adjustments

may be made to accommodate specific academic schedules (e.g., a limited number of 9-week cooperative agreements).

MATCHING REQUIREMENTS: The *EEEL*, *MEL*, *PL*, *MSEL*, *BFRL*, and *ITL SURF* Programs encourage, but do not require, cost sharing. In the spirit of a true partnership, successful applicant institutions will be encouraged to contribute some partial support to the program. A suggested level of participation would be direct coverage of (partially or entirely) student travel (one round trip common carrier) or lodging costs (approximately \$2,200); total coverage of indirect costs and/or fringe benefits (NIST will not authorize funds for indirect costs or fringe benefits); a stated intent to support the participating student(s) at a research conference; and/or awarding of academic credit for the student research. The level of cost sharing will not be considered in the award decision. Less than ten percent of the associated student subsistence, travel and lodging has been provided in cost sharing by the participating institutions in previous years.

APPLICATION KIT: For the *EEEL*, *MEL*, *CSTL*, *PL*, *MSEL*, *BFRL*, and *ITL SURF* Programs, an application kit, containing all required forms and certifications, may be obtained by contacting Ms. Anita Sweigert, (301) 975-4200; websites for each program's application kit may be accessed through the following website: <http://www.surf.nist.gov>.

Electronics and Electrical Engineering (EEEL) Grants Program:

DATES: The *Electronics and Electrical Engineering Grants Program* proposals must be received no later than the close of business September 30, 2002. Proposals received after June 30, 2002 will continue to be processed and considered for funding but may be funded in the next fiscal year, subject to the availability of funds.

ADDRESSES: For the *Electronics and Electrical Engineering Grants Program*, submit one signed original and two copies of the proposal package to:

Electronics and Electrical Engineering Laboratory

Attn.: D. J. Hamilton

National Institute of Standards and Technology

100 Bureau Drive, Stop 8100

Gaithersburg, MD 20899-8100

Tel.: (301) 975-2227

Fax: (301) 975-4091

AUTHORITY: As authorized by 15 U.S.C. 272(b) and (c), the NIST Electronics and Electrical Engineering Laboratory conducts a basic and applied research program directly and through grants and cooperative agreements to eligible recipients.

PROGRAM DESCRIPTION AND OBJECTIVES: The *Electronics and Electrical Engineering Grants Program* solicits proposals in support of the broad program objectives identified below.

The *Electronics and Electrical Engineering Grants Program* supports the formal mission of the associated Laboratory: The Electronics and Electrical Engineering Laboratory promotes U.S. economic growth by providing measurement capability of high impact focused primarily on the critical needs of the U.S. electronics and electrical industries, and their customers and suppliers.

More specifically, the *Electronics and Electrical Engineering Grants Program* solicits proposals to support specific programs in the areas of metrology for semiconductors (including mainstream silicon, power devices, and compound semiconductors), superconductors (including cryoelectronics and bulk superconductors), electronic instrumentation, radio-frequency technology (including microwave and millimeter-wave, antennas, and electromagnetic compatibility/interference), optoelectronics, magnetics (including bulk magnetic materials and magnetic data storage), video (including flat-panel displays), electronic commerce as applied to electronic products and devices, the transmission and distribution of electrical power, national electrical standards (fundamental, generally quantum-based physical standards), and law enforcement (clothing, communication systems, emergency equipment, investigative aids, protective equipment, security systems, vehicles, speed-measuring equipment, weapons, and analytical techniques and standard reference materials used by the public safety community).

For details on these various activities, please see the Electronics and Electrical Engineering Laboratory website at <http://www.eeel.nist.gov>. Note that documents describing the current

programs for the five technical divisions and two offices are available through the home page.

Technical contacts for these areas are:

Semiconductors

Semiconductor Electronics Division - Division Chief: Dr. David G. Seiler;

(301) 975-2054; david.seiler@nist.gov

Office of Microelectronics Programs - Director: Dr. Stephen Knight; (301) 975-

4400; stephen.knight@nist.gov

Superconductors (bulk); Magnetics - Laboratory Acting Deputy Director: Dr. Alan

H. Cookson; (301) 975-2220; alan.cookson@nist.gov

Superconductors (cryoelectronics); National electrical standards (Josephson array development)

Electromagnetic Technology Division - Division Chief: Dr. Richard E. Harris;

(303) 497-3678; richard.harris@boulder.nist.gov

Electronic instrumentation; Video; Electronic commerce; National electrical standards (other than Josephson array development)

Electricity Division - Division Chief: Dr. Bruce F. Field; (301) 975-2400;

bruce.field@nist.gov

Radio-frequency technology

Radio-Frequency Technology Division - Division Chief: Dr. Dennis S. Friday;
(303) 497-3132; Friday@boulder.nist.gov

Optoelectronics

Optoelectronics Division; Office of Optoelectronics Programs - Division Chief
and Office Director: Dr. Gordon W. Day; (303) 497-5432;
gwday@boulder.nist.gov

Law enforcement

Office of Law Enforcement Standards - Director: Dr. Kathleen Higgins; (301)
975-2757; kathleen.higgins@nist.gov

ELIGIBILITY: The *Electronics and Electrical Engineering Grants Program* is open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

FUNDING AVAILABILITY: Over the past three years, the Electronics and Electrical Engineering laboratory funded a total of approximately \$1,000,000 in grants and cooperative agreements. The amount available each year fluctuates considerably based on programmatic needs. Individual awards are expected to range between \$5,000 and \$150,000.

PROPOSAL REVIEW PROCESS: For the *Electronics and Electrical Engineering Grants Program*, proposals will be distributed to the appropriate Division Chief or Office Director based on technical area by one or more technical professionals familiar with the programs of the Electronics and Electrical Engineering Laboratory. The Divisions and Offices will score proposals based the evaluation criteria described in the Evaluation Criteria section below.

Reviews will be conducted on a monthly basis during the first quarter, and quarterly thereafter, and all proposals received during the month or quarter will be ranked based on the reviewers' scores. Based on the reviewers' scores, recommendations of the Division Chiefs and Office Directors, the availability of funding, and relevance to the objectives of the *Electronics and Electrical Engineering Grants Program*, as described above, the Laboratory Director will provide recommendations for funding to the NIST Grants Officer. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

EVALUATION CRITERIA: The Divisions and Offices will score proposals based on the

following criteria and weights:

Proposal addresses specific program objectives as described in this notice (25%)

Proposal provides evidence of applicant's expertise in relevant technical area (20%)

Proposal offers innovative approach (20%)

Proposal provides realistic schedule with defined milestones (20%)

Proposal provides adequate rationale for budget (15%)

AWARD PERIOD: For the *Electronics and Electrical Engineering Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Electronics and Electrical Engineering Grants Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

MATCHING REQUIREMENTS: The *Electronics and Electrical Engineering Grants Program* does not require any matching funds.

APPLICATION KIT: An application kit, containing all required application forms and certifications is available by contacting: D.J. Hamilton, (301) 975-2227.

Manufacturing Engineering Laboratory (MEL) Grants Program:

DATES: The *MEL Grants Program* proposals must be received no later than the close of business September 30, 2002. Proposals received after June 30, 2002 will continue to be processed and considered for funding but may be funded in the next fiscal year, subject to the availability of funds. Each applicant must submit one signed original and two copies of each proposal along with a Grant Application, (Standard Form 424 REV. 7/97 and other required forms).

ADDRESSES:

For the *MEL Grants Program*, submit one signed original and two copies of the proposal, clearly marked to identify the field of research, to:

Manufacturing Engineering Laboratory

Attn: Mrs. Barbara Horner

National Institute of Standards and Technology

100 Bureau Drive, Stop 8200

Building 220, Room B322

Gaithersburg, Maryland 20899-8200

Tel: (301) 975-4345

E-mail: barbara.horner@nist.gov

AUTHORITY: As authorized under 15 U.S.C. 272(b) and (c), the MEL conducts a basic and applied research program directly and through grants and cooperative agreements to eligible recipients.

PROGRAM DESCRIPTION AND OBJECTIVES: All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

- I. Precision Engineering Division, 821 - The primary objective is to support laboratory programs in the areas of Engineering Metrology, Large-Scale Metrology, Nanometer-Scale Metrology, and Surface Metrology. The contact person for this division is: Dr. Dennis Swyt, and he may be reached at (301) 975-3463; dennis.swyt@nist.gov.
- II. Manufacturing Metrology Division, 822 - The primary objective is to support laboratory programs in Mechanical Metrology; Advanced Optics Metrology; Predictive Process Engineering; and Metrology and Smart Sensor Systems for

Manufacturing Equipment. The contact person for this division is: Dr. E. Clayton Teague, and he may be reached at (301) 975-6600; clayton.teague@nist.gov.

III. Intelligent Systems Division, 823 - The primary objective is to support laboratory programs in Intelligent Open Architecture Control of Manufacturing Systems, Intelligent Controls of Mobility Systems, and Intelligent Systems. The contact person for this division is: Dr. John M. Evans, and he may be reached at (301) 975-3418; j.evans@nist.gov.

IV. Manufacturing Systems Integration Division, 826- - The primary objective is to pursue semantics- and ontology-based systems integration technology and standards through support of laboratory programs in Manufacturing Enterprise Integration; Manufacturing Simulation and Visualization; Product Engineering; and Meso-Micro-Nano-Manufacturing. The contact person for this division is: Dr. Steven R. Ray, and he may be reached at (301) 975-3508; steven.ray@nist.gov.

ELIGIBILITY: The *MEL Grants Program* is be open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

FUNDING AVAILABILITY: In fiscal year 2002, the *MEL Grants Program* anticipates funding of approximately \$750,000, including new awards and continuing projects. Individual awards are expected to range from approximately \$25,000 to \$300,000.

PROPOSAL REVIEW PROCESS: Responsive proposals will be reviewed in a two-step process. First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the section above that the proposal addresses will conduct a technical review of proposals, based on the evaluation criteria described below. Reviews will be conducted no less than once per quarter, and all proposals since the last review session will be ranked based on the reviewers' scores. Second, the Division Chief or Laboratory Director will make application selections. In making application selections, the Division Chief or Laboratory Director will take into consideration the results of the reviewers' evaluations, the compatibility of the applicant's proposal with the program objectives of the particular division that the proposal addresses, the availability of funds, and relevance to the objectives of the MEL Grants Program. These objectives are described above in the Program Objectives. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

EVALUATION CRITERIA: For the *MEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.
2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of manufacturing engineering and metrology research.
3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.
4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary NIST or other facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

AWARD PERIOD: For the *MEL Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved,

funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MEL program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

MATCHING REQUIREMENTS: The *MEL Grants Program* does not require any matching funds.

APPLICATION KIT: An application kit, containing all required application forms and certifications is available by electronic mail to: Mrs. Barbara Horner, barbara.horner@nist.gov. Alternatively, Mrs. Horner can be contacted at (301) 975-4345.

Chemical Science and Technology Laboratory Grants Program:

DATES: The *Chemical Science and Technology Laboratory Grants Program* proposals must

be received no later than the close of business September 30, 2002. Proposals received after June 30, 2002 will continue to be processed and considered for funding but may be funded in the next fiscal year, subject to the availability of funds.

ADDRESSES: For the *Chemical Science and Technology Laboratory Grant Program*

applicants are requested to submit one signed original and two copies of the proposal clearly marked to identify the field of research to:

Attn. Dr. William F. Koch

National Institute of Standards and Technology

100 Bureau Drive, Stop 8300

Gaithersburg, MD. 20899-8300

Tel (301) 975-8301

E-Mail: william.koch@nist.gov

AUTHORITY: As authorized under 15 U.S.C. 272 (b) and (c), the Chemical Science and Technology Laboratory conducts a basic and applied research program directly and through grants and cooperative agreements to eligible recipients.

PROGRAM DESCRIPTION AND OBJECTIVES: All proposals submitted to the *Chemical Science and Technology Laboratory Grants Program* must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be

contacted for clarification of the program objectives.

- I. Biotechnology Division, 831 – The primary objective is to advance the commercialization of biotechnology by developing the scientific/engineering technical base, reliable measurements, standards, data and models to enable U.S. industry to quickly and economically produce biochemical products with appropriate quality control. The contact person for this division is: Dr. Gary L. Gilliland, and he may be reached at (301) 975-2629.

- II Process Measurements Division, 836 – The primary objective is to develop and provide measurement standards and services, measurement techniques, recommended practices, sensing technology, instrumentation, and mathematical models required for analysis, control, and optimization of industrial processes. The Division's research seeks fundamental understanding of, and generates key data pertinent to, chemical process technology. These efforts include the development and validation of data-predictive computational tools and correlation's, computer simulations of processing operations, and provision of requisite chemical, physical, and engineering data. The contact person for this division is: Dr. James R. Whetstone, and he may be reached at (301) 975-2609.

- III Surface and Microanalysis Science Division, 837 – The primary objective is to promote U.S. economic growth, safety, health, and environmental quality by

working with industry, other government agencies, and standards organizations to develop and apply key technologies, measurements, and standards for spatially and temporally resolved chemical characterization. The contact person for this division is: Dr. Richard R. Cavanagh, and he may be reached at (301) 975-2368.

- IV Physical and Chemical Properties Division, 838 – The primary objective is to be the Nation's reference laboratory for *measurements, standards, data, and models* for, the thermophysical and thermochemical properties of gases, liquids, and solids - both pure materials and mixtures. The rates and mechanisms of chemical reactions in the gas and liquid phases, fluid-based physical processes and systems, including separations, low-temperature refrigeration, and low-temperature heat transfer and flow. The contact person for this division is: Dr. Mickey Haynes, and he may be reached at (303) 497-3247.
- V. Analytical Chemistry Division, 839 – The primary objective is to serve as the Nation's reference laboratory for chemical measurements and standards to enhance U.S. industry's productivity and competitiveness, assure equity in trade, and provide quality assurance for chemical measurements used for assessing and improving public health, safety, and the environment. The contact person for this division is: Dr. Willie E. May, and he may be reached at (301) 975-3108.

ELIGIBILITY: The *Chemical Science and Technology Laboratory Grants Program* is open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

FUNDING AVAILABILITY: In fiscal year 2002, the Chemical Science and Technology Laboratory anticipates funding of approximately \$1,000,000. Individual awards are expected to range from approximately \$5,000 to \$100,000.

No funds have been set aside specifically for support of the CSTL Grants Program. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by individual divisions within the laboratory. Where funds are identified as available for grants, those funds will be awarded to highly ranked proposals as determined by the process described in this notice.

PROPOSAL REVIEW PROCESS: For the *Chemical Science and Technology Laboratory Grants Program*, proposals will be reviewed in a two-step process. First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described below. Reviews will be conducted on a monthly basis, and all proposals received during the month will be ranked based on the

reviewers' scores. Second, the Division Chief will make application selections. In making application selections, the Division Chief will take into consideration the results of the reviewers' evaluations, the compatibility of the applicant's proposal with the program objectives of the particular division or center that the proposal addresses, the availability of funds, and relevance to the objectives of the *Chemical Science and Technology Laboratory Grants Program*. These objectives are described above in the "Program Objectives" section. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

EVALUATION CRITERIA: For the *Chemical Science and Technology Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.
2. Qualifications of Technical Personnel. Reviewers will consider the professional

accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary NIST or other facilities and overall support to accomplish project objectives.
4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of Chemistry.

Each of these factors will be given equal weight in the evaluation process.

AWARD PERIOD: For the *Chemical Science and Technology Laboratory Grant Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress continued relevance to the mission of the Chemical Science and Technology Laboratory program, and the availability of funds. The multi-year awards must have scopes of work that

can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e. the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

MATCHING REQUIREMENTS: The *Chemical Science and Technology Laboratory Grants Program* does not require any matching funds.

CONTACT: For information on the *Chemical Science and Technology Laboratory Grants Program*, please contact Dr. William Koch, (301) 975-8301.

APPLICATION KIT: For the *CSTL Grants Program*, an application kit, containing all required application forms and certifications is available by contacting Mr. Neil Alderoty, (301) 975-8303.

Physics Laboratory Grants Program:

DATES: The *Physics Laboratory Grants Program* proposals must be received no later than the close of business September 30, 2002. Proposals received after June 30, 2002 will continue to be processed and considered for funding but may be funded in the next fiscal year, subject to the availability of funds.

ADDRESSES: For the *Physics Laboratory Grant Program* applicants are requested to submit one signed original and two copies of the proposal clearly marked to identify the field of research to:

Attn. Ms. Anita Sweigert

National Institute of Standards and Technology

100 Bureau Drive, Stop 8400

Gaithersburg, MD. 20899-8400

Tel (301) 975-4200

E-Mail: anita.sweigert@nist.gov

AUTHORITY: As authorized under 15 U.S.C. 272 (b) and (c), the Physics Laboratory conducts a basic and applied research program directly and through grants and cooperative agreements to eligible recipients.

PROGRAM DESCRIPTION AND OBJECTIVES: All proposals submitted to the *Physics Laboratory Grants Program* must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

- I. Electron and Optical Physics Division, 841 – The primary objective is to supplement division activities in characterization of nanometer-scale electronic and magnetic structures, characterization of EUV optical components to support semiconductor lithography and ultraviolet radiometric metrology. The contact person for this division is: Dr. Charles W. Clark and he may be reached at (301) 975-3709.
- II Atomic Physics Division, 842 – The primary objective is to support division programs aimed at determining basic atomic properties and developing new metrology techniques in atomic spectroscopy, quantum processes, plasma radiation, laser cooling and trapping, and quantum metrology. The contact person for this division is: Dr. Wolfgang L. Wiese and he may be reached at (301) 975-3200.
- III Optical Technology Division, 844 – The primary objective is to develop improve and maintain national standards for radiation thermometry, spectroradiometry, photometry, and spectrophotometry as well as conduct basic theoretical and experimental research on the photophysical and photochemical properties of materials, in radiometric and spectroscopic techniques and instrumentation, and in the application of optical technologies. The contact person for this division is: Dr. Albert C. Parr and he may be reached at (301) 975- 2316.

- IV Ionizing Radiation Division, 846 – The primary objective is to provide primary standards and measurement methods and technology to support the Division’s work in meeting national needs in radiation interactions and dosimetry, neutron interactions, dosimetry and radioactivity including both theoretical/experimental and applied research programs. The contact person for this division is: Dr. Bert M. Coursey and he may be reached at (301) 975-5584.
- V. Time and Frequency Division, 847 – The primary objective is to supplement division basic and applied research programs in the areas of phase noise measurements, network synchronization, ion storage, atomic standards and optical frequency measurements in support of future standards, dissemination services, and measurement methods. The contact person for this division is: Dr. Donald B. Sullivan and he may be reached at (303) 497-3772.

ELIGIBILITY: The *Physics Laboratory Grants Program* is open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

FUNDING AVAILABILITY: In fiscal year 2002, the Physics Laboratory anticipates funding of approximately \$1,400,000, including new awards and continuing projects. Funding

availability will be apportioned by quarter. Individual awards are expected to range from approximately \$5,000 to \$250,000.

PROPOSAL REVIEW PROCESS: For the *Physics Laboratory Grants Program*, responsive proposals will be considered as follows: First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described below. Reviews will be conducted on a monthly basis, and all proposals received during the month will be ranked based on the reviewers' scores. If non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Next, the Division Chief will make final application selections, taking into consideration the results of the reviewers' evaluations, including rank; the compilation of a slate that, when taken as a whole, is likely to best further the program goals described above; and the availability of funds.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible.

Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award.

The decisions of the Grants Officer are final.

EVALUATION CRITERIA: For the *Physics Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.
2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.
3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary NIST or other facilities and overall support to accomplish project objectives.
4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the

field of physics.

Each of these factors will be given equal weight in the evaluation process.

AWARD PERIOD: For the *Physics Laboratory Grant Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year project is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the Physics Laboratory program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

MATCHING REQUIREMENTS: The *Physics Laboratory Grants Program* does not require any matching funds.

APPLICATION KIT: For the *Physics Laboratory Grants Program*, an application kit, containing all required application forms and certifications is available by contacting

Ms. Anita Sweigert, (301) 975-4201.

MSEL Grants Program:

DATES: *The MSEL Grants Program* proposals must be received no later than the close of business September 30, 2002. Proposals received after June 30, 2002 will continue to be processed and considered for funding but may be funded in the next fiscal year, subject to the availability of funds. Each applicant must submit one signed original and two copies of each proposal along with a Grant Application, (Standard Form 424 REV. 7/97 and other required forms).

ADDRESSES: *For the MSEL Grants Program*, submit one signed original and two copies of the proposal, clearly marked to identify the field of research, to:

Materials Science and Engineering Laboratory

Attn.: Ms. Marlene Taylor

National Institute of Standards and Technology

100 Bureau Drive, Stop 8501

Building 223, Room A305

Gaithersburg, Maryland 20899-8501

Tel: (301) 975-5653

E-mail: marlene.taylor@nist.gov

AUTHORITY: The authority for the *MSEL Grants Program* is as follows: As authorized under 15 U.S.C. 272 (b) and (c), the MSEL conducts a basic and applied research program directly and through grants and cooperative agreements to eligible recipients.

PROGRAM DESCRIPTION AND OBJECTIVES: All proposals submitted to the *MSEL Grants Program* must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

I. Ceramics Division, 852 - The primary objective is to supplement division activities in the area of ceramic processing, tribology, composites, machining, interfacial chemistry, and microstructural analysis. The contact person for this division is: Dr. Ronald Munro and he may be reached at (301) 975-6127 or by e-mail at ronald.munro@nist.gov.

II. Polymers Division, 854 - The primary objective is to support division programs in electronics materials, biomaterials, multiphase materials and processing characterization through participation in research on metrology, synthesis, processing and characterization of structure, mechanical, thermal and electrical properties. The contact person for this division is: Dr. Bruno Fanconi and he may be reached at (301) 975-6769 or by e-mail at bruno.fanconi@nist.gov.

III. Metallurgy Division, 855 - The primary objective is to develop techniques to predict,

measure and control transformations, phases, microstructure and kinetic processes as well as mechanical, physical and chemical properties in metals and their alloys. The contact person for this division is: Dr. Richard J. Fields and he may be reached at (301) 975-5712 or by e-mail at richard.fields@nist.gov.

IV. NIST Center for Neutron Research, 856 - The primary objective is to develop high resolution cold and thermal neutron scattering research approaches and related physics, chemistry, macromolecular and materials applications. The contact person for this division is: Dr. John J. Rush and he may be reached at (301) 975-6231 or by e-mail at john.rush@nist.gov.

ELIGIBILITY: The *MSEL Grants Program* is open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

FUNDING AVAILABILITY: In fiscal year 2002, the *MSEL Grants Program* anticipates funding of approximately \$2,500,000, including new awards and continuing projects. Most grants and cooperative agreements are expected to be in the \$25,000 to \$100,000 per year range.

PROPOSAL REVIEW PROCESS: For the *MSEL Grants Program* proposals will be reviewed

in a two-step process. First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the section above that the proposal addresses will conduct a technical review of proposals, as they are received on a rolling basis, based on the evaluation criteria. Second, the Division Chief or Center Director will make application selections. In making application selections, the Division Chief or Center Director will take into consideration the results of the reviewers' evaluations, the compatibility of the applicant's proposal with the program objectives of the particular division or center that the proposal addresses, the availability of funds, and relevance to the objectives of the MSEL Grants Program. These objectives are described above in the "Program Objectives" section. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

EVALUATION CRITERIA: For the *MSEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary NIST or other facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of materials science and engineering and neutron research.

Each of these factors will be given equal weight in the evaluation process.

AWARD PERIOD: For the *MSEL Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MSEL program, and the availability of funds. The multi-year awards must

have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

MATCHING REQUIREMENTS: The *MSEL Grants Program* does not require any matching funds.

APPLICATION KIT: For the *MSEL Grants Program*, an application kit, containing all required application forms and certifications is available by contacting Ms. Marlene Taylor, (301) 975-5653.

Fire Research Grants Program:

DATES: *The Fire Research Grants Program* proposals must be received no later than the close of business September 30, 2002. Proposals received after June 30, 2002 will continue to be processed and considered for funding but may be funded in the next fiscal year, subject to the availability of funds.

ADDRESSES: For the *Fire Research Grants Program* submit one signed original and two copies of the proposal to:

Building and Fire Research Laboratory (BFRL)

Attn.: Ms. Wanda Duffin

National Institute of Standards and Technology

100 Bureau Drive, Stop 8660

Gaithersburg, Maryland 20899-8660

Tel: (301) 975-6863

E-mail: wanda.duffin@nist.gov

Website: <http://www.bfrl.nist.gov>

AUTHORITY: As authorized by 15 U.S.C. 278f, the NIST Building and Fire Research Laboratory conducts directly and through grants and cooperative agreements, a basic and applied fire research program.

PROGRAM DESCRIPTION AND OBJECTIVES: The program description and objectives for the *Fire Research Grants Program* are as follows:

- A. Analysis and Prediction: The objectives are to develop understanding and predictive methods for dynamic fire phenomena to advance fire science and engineering practice and to perform research to understand the heat and mass transfer processes occurring in fires in order to improve predictions of the growth, spread, suppression, and emissions transport from fires of all scales. Experiments and metrology are developed and used to develop, support, and verify advanced computer simulations of fire phenomena, fire hazards, fire protection, and fire fighting. The contact person for this

group is: Dr. Anthony Hamins, and he may be reached at (301) 975-6598.

- B. Fire Metrology: The objective is to apply measurement science in the development and quantification of new and existing measurement methods for studying fire growth, fire-induced flows, flame radiation, smoke formation and dynamics, species production, heat transfer, fire suppression, and fire detection. The contact person for this group is: Dr. George Mulholland, and he may be reached at (301) 975-6695

- C. Fire Fighting Technology: The objectives are to conduct research that enables advances in fire fighter safety, fire ground operations, and effectiveness of the fire service; develop and apply measurements, modeling, and technology, and improve the understanding of the behavior, prevention and control of fires to enhance: fire fighting operations and equipment, fire suppression, fire investigations, and disaster response; and provide input, including experimental data, fire modeling and test protocols, to advance the effectiveness of fire safety standards and codes. The contact person for this group is Mr. Nelson Bryner, and he may be reached at (301) 975-6868.

- D. Integrated Performance Assessment: The objective is to produce tools utilizing enhanced data and prediction methods to quantify fire events for fire hazard and risk assessment; for fire fighting operations and training; for fire investigations; and for performance evaluations of fire protection systems in buildings, transportation systems, and vehicles in response to fire. Stakeholders include architects and design engineers;

manufacturers of building materials, products, and furnishings; code developers, enforcers, and regulatory authorities; and those exposed to direct risk such as building owners, occupants, the fire service, and the general public. The contact person for this group is: Dr. Kathy Notarianni, and she can be reached at (301) 975-6883.

- E. Materials and Products: The objective is to perform research enabling the confident development by industry of new, less-flammable materials and products. This capability is based on understanding fundamentally the mechanisms that control the ignition, flame spread and burning rate of materials, as well as and the chemical and physical characteristics that affect these aspects of flammability. This includes: developing methods of measuring the response of a material to fire conditions that enable assured prediction of the full-scale performance of the final product; developing computational molecular dynamics and other mechanistic approaches to understand flame retardant mechanisms and the effects of polymer chemical structure on flammability; characterizing the burning rates of charring and non-charring polymers and composites; and delineating and modeling the enthalpy and mass transfer mechanisms of materials combustion. The contact person for this group is Dr. Jeffrey Gilman, and he can be reached at (301) 975-6573.

ELIGIBILITY: The *Fire Research Grants Program* is open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of

foreign governments; and international organizations.

FUNDING AVAILABILITY: For the *Fire Research Grants Program*, the annual budget is approximately \$1.0 million. Because of commitments for the support of multi-year projects, only a portion of the budget is available to initiate new programs in any one year. Most grants and cooperative agreements are in the \$10,000 to \$100,000 per year range.

PROPOSAL REVIEW PROCESS: Responsive proposals will be assigned, as received on a rolling basis, to the appropriate group leader of the five programs listed above in the program description and objectives. Proposals are evaluated for technical merit based on the evaluation criteria by at least three reviewers chosen from NIST professionals, technical experts from other interested government agencies, and experts from the fire research community at large. When non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Group leaders will make funding recommendations to the Division Chief based on the technical evaluation score and the relationship of the work proposed to the objectives of the program.

In making application selections, the Division Chief will take into consideration the results of the evaluations, the scores of the reviewers, the group leader's recommendation, the availability of funds, and relevance to the objectives of the Fire Research Grants Program, as described in the Program Description and Objectives section for this program.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

EVALUATION CRITERIA: For the *Fire Research Grants Program*, the technical evaluation criteria are as follows:

- a. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the proposal and the fit to NIST's in-house fire research program. (0 - 35 points).
- b. Potential impact of the results. Reviewers will assess the potential impact and the technical application of the results to our in-house programs and the fire safety community. (0 - 25 points)
- c. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 - 20 points)

- d. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 - 20 points)

AWARD PERIOD: For the *Fire Research Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year project is approved, funding will initially be provided for only the first year of the program. If an application is selected for funding, DoC has no obligation to provide any additional future funding in connection with that award. Funding for each subsequent year of a multi-year proposal will be contingent on satisfactory progress, continuing relevance to the mission of the NIST Fire Research Program, and the availability of funds.

MATCHING REQUIREMENTS: The *Fire Research Grants Program* does not require any matching funds.

APPLICATION KIT: For the *Fire Research Grants Program*, an application kit, containing all required application forms and certifications is available by contacting Ms. Wanda Duffin, (301) 975-6863, website: <http://www.bfrl.nist.gov>.

ADDITIONAL INFORMATION:

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of October 1, 2001 (66 FR 49917) are applicable to this solicitation. In addition, the following information is applicable

to all programs described above.

FUNDING AVAILABILITY: For all Financial Assistance programs listed above, awards are contingent on the availability of funds.

CATALOG OF FEDERAL DOMESTIC ASSISTANCE NAME AND NUMBER:

Measurement and Engineering Research and Standards - 11.609

FOR FURTHER INFORMATION CONTACT: All grants related administration questions concerning these programs should be directed to the NIST Grants and Agreements Manangement Division at (301) 975-6328.

Where websites are referenced within this notice, those without websites may contact the appropriate Program official to obtain information.

INITIAL SCREENING OF ALL APPLICATIONS: All applications received in response to this announcement will be reviewed to determine whether or not they are complete and responsive. Incomplete or non-responsive applications will not be reviewed for technical merit. The Program will retain one copy of each non-responsive application for three years for recordkeeping purposes. The remaining copies will be destroyed.

FEES AND/OR PROFIT: It is not the intent of NIST to pay fee or profit for any of the

financial assistance awards that may be issued pursuant to this announcement.

AUTOMATED STANDARDIZED APPLICATION FOR PAYMENT SYSTEM (ASAP):

During FY 2002 and becoming mandatory in FY 2003, the Department of Commerce will begin using the Department of Treasury's ASAP. NIST began using the ASAP system in July 2001 and continues to establish new accounts in ASAP. Awards made pursuant to this announcement may contain the ASAP payment clause. In order to receive payments for services under these awards, recipients will be required to register with the Department of Treasury and indicate whether or not they will use the on-line or voice response method of withdrawing funds from their ASAP established accounts. More information regarding ASAP can be found on-line at <http://www.fms.treas.gov/asap/index.html>.

PAPERWORK REDUCTION ACT: The standard forms in the application kit involve a collection of information subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, SF-LLL, and CD-346 have been approved by OMB under the respective Control Numbers 0348-0043, 0348-0044, 0348-0040, 0348-0046, and 0605-0001.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

RESEARCH PROJECTS INVOLVING HUMAN SUBJECTS, HUMAN TISSUE, DATA OR RECORDINGS INVOLVING HUMAN SUBJECTS:

Any proposal that includes research involving human subjects, human tissue, data or recordings involving human subjects must meet the requirements of the Common Rule for the Protection of Human Subjects, codified for the Department of Commerce at 15 CFR Part 27. In addition, any proposal that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, FDA, and other federal agencies on these topics, and all Presidential statements of policy on these topics.

On December 3, 2000, the U.S. Department of Health and Human Services (DHHS) introduced a new Federalwide Assurance of Protection of Human Subjects (FWA). The FWA covers all of an institution's Federally-supported human subjects research, and eliminates the need for other types of Assurance documents. The Office for Human Research Protections (OHRP) has suspended processing of multiple project assurance (MPA) renewals. All existing MPAs will remain in force until further notice. For information about FWAs, please see the OHRP website at <http://ohrp.osophs.dhhs.gov/irbasur.htm>.

In accordance with the DHHS change, NIST will continue to accept the submission of human subjects protocols that have been approved by Institutional Review Boards (IRBs) possessing a current, valid MPA from DHHS. NIST also will accept the submission of human subjects

protocols that have been approved by IRBs possessing a current, valid FWA or MPA from DHHS. NIST will not issue a single project assurance (SPA) for any IRB reviewing any human subjects protocol proposed to NIST.

On August 9, 2001, the President announced his decision to allow Federal funds to be used for research on existing human embryonic stem cell lines as long as prior to his announcement (1) the derivation process (which commences with the removal of the inner cell mass from the blastocyst) had already been initiated and (2) the embryo from which the stem cell line was derived no longer had the possibility of development as a human being. NIST will follow guidance issued by the National Institutes of Health at <http://escr.nih.gov/> for funding such research.

RESEARCH PROJECTS INVOLVING VERTEBRATE ANIMALS:

Any proposal that includes research involving vertebrate animals must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals" which can be obtained from National Academy Press, 2101 Constitution Avenue, NW, Washington, D.C. 20055. In addition, such proposals must meet the requirements of the Animal Welfare Act (7 U.S.C. 2131 et seq.), 9 CFR Parts 1, 2, and 3, and if appropriate, 21 CFR Part 58. These regulations do not apply to proposed research using pre-existing images of animals or to research plans that **do not** include live animals that are being cared for, euthanased, or used by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of

animal products or to animal cell lines or tissues from tissue banks.

MATCHING FUNDS:

Although many of the programs described in this notice do not require cost share, if it is determined that your proposal falls within the authority of 19 U.S.C. 2543-45 cost share will be required as follows:

Pursuant to 19 U.S.C. 2543-45, financial assistance shall not exceed 75 percent of such program or activity, when the primary purpose of such program or activity is--

- (1) to increase the awareness of proposed and adopted standards-related activities;
- (2) to facilitate international trade through the appropriate international and domestic standards-related activities;
- (3) to provide adequate United States representation in international standards-related activities; and
- (4) to encourage United States exports through increased awareness of foreign standards-related activities that may affect United States exports.

TYPE OF FUNDING INSTRUMENT:

The funding instrument will be a grant or cooperative agreement, depending on the nature of the proposed work. A grant will be used unless NIST is “substantially involved” in the project, in which case a cooperative agreement will be used. A common example of substantial involvement is collaboration between NIST scientists and recipient scientists or

technicians. Further examples are listed in Section 5.03.d of Department of Commerce Administrative Order 203-26, which can be found at <http://www.osec.doc.gov/bmi/daos/203-26.htm>. NIST will make decisions regarding the use of a cooperative agreement on a case-by-case basis. Funding for contractual arrangements for services and products for delivery to NIST is not available under this announcement.

INDIRECT COSTS: For the *EEEL*, *MEL*, *CSTL*, *Physics*, *MSEL*, *BFRL*, and *ITL SURF* Programs, no Federal funds will be authorized for Indirect Costs (IDC) nor fringe benefits; however, an applicant may provide for IDC and/or fringe benefits under his/her portion of Cost Sharing.

CLASSIFICATION:

This funding notice was determined to be "not significant" for purposes of Executive Order 12866.

It has been determined that this notice does not contain policies with Federalism implications as that term is defined in Executive Order 13132.

Applications under these programs are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

Because notice and comment are not required under 5 U.S.C. 553, or any other law, for notices relating to public property, loans, grants, benefits or contracts (5 U.S.C. 553(a)), a Regulatory Flexibility Analysis is not required and has not been prepared for this notice, 5 U.S.C. 601 et seq.

Dated:

Karen H. Brown
Deputy Director, NIST